

## ABSTRACT OF THE DISCLOSURE

A method for producing a protein suitable for X-ray crystallographic analysis, in a cell-free protein synthesis system comprising a cell-free extract, a nucleic acid coding for said protein, and amino acids for the substrate of said protein, wherein said amino  
5 acids comprises at least one amino acid comprising a heavy atom, and wherein the introduced rate of said amino acid comprising the heavy atom into the synthesized protein is at least 80%.